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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,695	12/30/2003	Byung Kee Kim	1315-049	2857

22429 7590 01/13/2006

LOWE HAUPTMAN GILMAN AND BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300 /310
ALEXANDRIA, VA 22314

EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/747,695

Applicant(s)

KIM ET AL.

Examiner

George P. Wyszomierski

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/25/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1742

1. Claim 2 is objected to because in line 3 of this claim, it appears that "hexthoxide" should read --ethoxide--.

2. Claims 4, 5, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) The terms "said step of carburization" and "said carburized gas" in these claims lack antecedent basis. Given that no other aspect of the claimed invention relates in any way to carburizing or carburization, no reasonable determination of the scope of these claims can be made, and the prior art cannot be evaluated for whether it would or would not encompass a process within the limitations of these claims. Thus, no prior art will be applied against these claims at this time.

b) Claims 5 and 8 recite a temperature "below zero" but give no temperature scale, e.g. Celsius, Fahrenheit. Thus, the claims are indefinite.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirzada et al. (U.S. Patent 5,788,738).

Pirzada discloses a process of producing nanoscale powders that includes obtaining a precursor of the desired material, vaporizing at least a portion of the precursor, and condensing the vaporized material to form nanoscale powders by quenching in a zone of low pressure. With respect to claim 6, the condensing is performed in an inert atmosphere such as argon or helium when metals are being produced; see Pirzada column 10, line 26.

Pirzada does not specifically disclose forming tungsten by such a process. However, Pirzada is directed to the production of metals in general, and includes examples directed to the production of several metals as well as to tungsten oxide. Further, Pirzada column 3, lines 33-35 indicates that prior art methods are not useful for making refractory metals, implying that the Pirzada process would be more useful in this regard. Thus, it is a reasonable assumption that the production of tungsten powder would fall within the purview of the Pirzada process. Thus, a prima facie case of obviousness is established between the disclosure of Pirzada et al. and the presently claimed invention.


5. Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or suggest a process as claimed and which employs a precursor as recited in instant claim 2.

Art Unit: 1742

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the new central facsimile number, (571)-273-8300. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700

GPW

January 10, 2006